AMENDMENTS TO THE CLAIMS:

Please amend the claims as indicated below. This listing of claims will replace all prior versions and listings of claims in the application.

1.-22. (Cancelled)

23. (Currently Amended) A method of managing a transmission system wherein a plurality of sets of samples (N x M) is subject to an integral transform transmitted in said integral-transformed format over a millimetre-wave carrier and subject to a complementary integral transform to reconstruct said plurality of [[set]] sets of samples (N x M), comprising the steps of:

including in said system a plurality of terminals;

assigning to said terminals respective non-overlapping sets of samples or positions within said plurality of sets of samples; and

transmitting, simultaneously, a first set (X_1, X_2, ... X_N) of non-zero first samples pertaining to a first terminal of said plurality by inserting said first samples in the respective position assigned to said first terminal, and a second set (X_{N+1}, X_{N+2}, ... X_{2N}) of non-zero second samples pertaining to a second terminal of said plurality by inserting said second samples in the respective position assigned to said second terminal.

24. (Previously Presented) The method of claim 23, further comprising the steps of:

including in said system at least one further terminal adapted for exchanging samples with said plurality of terminals;

causing said at least one further terminal to subject to at least one of said integral transform and said complementary integral transform a plurality of sets of samples including at least two non-overlapping sets of non-zero samples, said two non-overlapping sets of samples pertaining to two respective different terminals of said plurality.

25. (Previously Presented) The method of claim 23, wherein said integral transform is selected from the group of the Fast Fourier Transform (FFT) and the Inverse Fast Fourier Transform (IFFT).

26. (Cancelled)

27. (Currently Amended) The method of claim [[26]] 23, wherein said millimetre-wave carrier is selected in the frequency range of 60 GHz.

28. (Currently Amended) A transmission system comprising:

an integral transform module for subjecting a plurality of sets of samples including at least one first set (X_1, X_2, ... X_N) of a non-zero sample to an integral transform;

a first transmitter for transmitting, over a millimetre-wave carrier, assigned non-overlapping sets comprising at least one first set (X_1, X_2, ... X_N) of samples in said integral-transformed format;

a second transmitter for transmitting, over a millimetre-wave carrier and simultaneously with the first transmitter, assigned non-overlapping sets comprising at least one second set (X_{N+1}, X_{N+2}, ... X_{2N}) of samples in said integral-transformed format;

a receiver for receiving said sets of samples transmitted in said integral-transformed format; and

a complementary integral transform module for subjecting said samples transmitted in said integral-transformed format as received by said receiver to a complementary integral transform and reconstructing therefrom said at least one set of non-zero samples.

29. (Previously Presented) The system of claim 28, wherein at least one terminal having assigned a non-overlapping set of samples or position within said plurality of sets of samples and comprising at least one of:

said integral transform module and said transmitter; or

said receiver and said complementary integral transform module.

30. (Previously Presented) The system of claim 28, further comprising at least one further terminal adapted for exchanging samples with said plurality of terminals, said at least one further terminal including at least one of said integral transform module and complementary integral transform module for subjecting to at least one of said integral transform and said complementary integral transform sets of samples including at least two non-overlapping sets of non-zero samples, non-overlapping sets of samples pertaining to two respective different terminals of said plurality.

31. (Previously Presented) The system of claim 30, in the form of a WLAN network, wherein at least one further terminal is an access point of said WLAN network.

32. (Cancelled)

33. (Currently Amended) The system of claim [[32]] 28, wherein at least one of a transmitter and receiver operates over a carrier in the frequency range of 60 GHz.

34. (Previously Presented) A transmitter terminal for the transmission system of claim 28, comprising:

a buffer for receiving said plurality of sets of samples;

an integral transform module for subjecting said plurality of sets of samples in said buffer to an integral transform to generate signals to be transmitted in an integral transformed format; and

sample allocation circuitry for selectively arranging at least one set of generally non-zero samples to be transmitted in a respective position of said buffer.

35. (Previously Presented) The transmitter terminal of claim 34, wherein allocating circuitry is configured for allocating at least a single set of generally non-zero samples in a single, respective set of positions of said buffer, said set allocation being indicative of said transmitter terminal.

36. (Previously Presented) The transmitter terminal of claim 33, comprising an RF module operating in the millimetre-wave range.

37. (Previously Presented) The transmitter terminal of claim 36, wherein said RF module operates in the range of 60 GHz.

38. (Previously Presented) A receiver terminal for the transmission system of claim 28, comprising:

a receiver for receiving samples transmitted in said integral-transformed format;

a buffer for receiving said plurality of sets of samples;

a complementary integral transform module for subjecting said sets of samples in said buffer to a complementary integral transform and reconstructing therefrom said at least one set of generally non-zero samples; and

sample allocation circuitry for selectively arranging at least one set of generally non-zero samples in a respective position of said buffer.

39. (Previously Presented) The receiver terminal of claim 38, wherein said allocating circuitry is configured for allocating at least a single set of generally non-zero samples in a single, respective set of positions of said buffer, said set allocation being indicative of the transmitter.

40. (Previously Presented) The receiver terminal of claim 38, comprising a receiver operating in the millimetre-wave range.

41. (Previously Presented) The receiver terminal of claim 40, wherein said receiver operates in the range of 60 GHz.

42. (Currently Amended) A computer readable medium encoded with a computer program product directly loadable ~~in the~~ into an internal memory of a computer, the computer program product ~~and~~ including software code portions performing the method of claim 23~~, where said product is capable of running on a computer~~.

43. (Currently Amended) A computer readable medium encoded with a computer program product directly loadable ~~in the~~ into an internal memory of a computer, the computer program product ~~and~~ including software code portions performing the method of claim 34~~, where said product is capable of running on a computer~~.

44. (Currently Amended) A computer readable medium encoded with a computer program product directly loadable ~~in the~~ into an internal memory of a computer, the computer program product ~~and~~ including software code portions

performing the method of claim 38~~, where said product is capable of running on a computer~~.